

## ABSTRACT OF THE DISCLOSURE

The method and apparatus for processing image data create a third image of large pixel number and large channel number by combining two images obtained by photographing an identical subject, a first image being of large pixel number and small channel number and a second image being of small pixel number and large channel number. The method and apparatus perform principal component analysis on the image data in a specified region including a point in the second image which corresponds to a pixel of interest at a specified point in the first image, determine coefficients in linear sums so that the linear sums of a specified number of principal component vectors obtained by the principal component analysis render output values of the pixel of interest in the first image and determine spectral information of said pixel of interest based on the coefficients to create the third image. The recording medium is loaded with a program for executing the above method.

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